

## ABSTRACT

A purpose of the present invention is to provide an inverter circuit capable of firmly turning ON IGBTs under limited condition, while a heat loss and noise can be hardly produced in semiconductor  
5 switching elements.

In a resonant type high frequency heating apparatus which is arranged by employing a DC power supply; a series connection circuit constructed of two semiconductor switching elements which are connected to the DC power supply; another series connection  
10 circuit constituted by a capacitor and a primary winding of a leakage transformer connected to both the terminals of one of the two semiconductor switching elements; and a driving means for driving the respective semiconductor switching elements respectively, a variable dead time forming circuit is provided  
15 in the driving means, while the variable dead time forming circuit makes a dead time constant at a switching frequency lower than, or equal to a predetermined switching frequency, and also, rapidly increases a dead time at a switching frequency higher than, or equal to the predetermined switching frequency. Furthermore,  
20 when the switching frequency becomes high, a limitation is provided by which the dead time is not further widened.